DEPARTMENT OF INFORMATION TECHNOLOGY

I.   DEPARTMENT MISSION TO THE COUNTY

To provide leadership to County management and departments in the deployment of Information Technology and Telecommunications. Services include planning, design, implementation and maintenance, consulting services, prudent risk and security assessment in the application of technology and communications, contract management, business analysis services and marketing. The DoIT is also responsible for providing Wide Area Network and Enterprise Data Center infrastructure services that are reliable, available and scalable.

II.   MAJOR BUSINESS UNIT FUNCTIONS

A.   ADMINISTRATION/CUSTOMER SUPPORT CENTER/BUSINESS & TECHNOLOGY INNOVATION SERVICES

Administration: Our Administration staff is comprised of the people who process all that paperwork, but there's a lot more that goes on behind that paper! They maintain the purchasing of Information Technology (IT) hardware, software, or services. They arrange speaking engagements to address a variety of technical subjects. They consult with IT staff in other County departments. They also host the annual Technology Faire, technology marketing and educational events within the various County communities.

Customer Support Center: Our Customer Support Center is staffed 6:00 AM to 5:30 PM Monday through Friday. The Customer Support Center documents all reported problems and either solves the problem immediately (85% of the time) or routes the problem to the appropriate business unit within DoIT for resolution. CSC is now also responsible for DoIT's internal IT Security program, and coordination of emergency messaging services via e-messaging, radio and cellular phone.

Business & Technology Innovation Services: The staff of this business unit monitor the activities of all departments in the area of Electronic Government, insure that information and ideas are shared between County departments, warrant that services and technologies in the E-Government marketplace are not wasted or duplicated, and insure that the latest technologies and ideas are available to all County departments. This Team has been working in concert with DoIT's Electronic Commerce Development Team on Internet and Intranet projects, spearheading the marketing efforts for the County's Geographic Information System, providing seminars and programs to integrate the County's technology leadership within the County employee workforce and the community at large. This Team also handles the continued development of DoIT's technology marketing services and educational

program. The brochure is available, both in paper form and as a multi-media CD presentation, to all County employees.

BUDGET: $1,966,398
FTE: 18

B. OPERATIONS

Our Operations Team operates the Data Center on a 24/5 basis with three full shifts on site Monday through Friday. Through the use of robotics, Operations has been able to go to a "lights out" model on weekends. We hope to expand this model over the next two years. The data center houses a variety of equipment, including our IBM mainframe, AS/400s, RS/6000s, Sun and IBM UNIX servers, and a number of NT servers. All of these systems are operated and monitored to meet the business requirements of our customers.

Operations is responsible for the hardware and operating software on these systems and performs the Database Administration duties in support of Oracle, Informix, and IDMS data management systems.

Operations utilizes a scheduling system to automate the processes run for our customers. High-speed laser printing, MICR printing, and impact printing are available to our customers. All paper stock and special forms are located within our warehouse adjacent to the data center. Off-site storage is utilized for customer's critical systems and information to support disaster and business recovery procedures. Operations is also responsible for insuring the County's "off-site" disaster recovery platform. Electronic backup facilities and recovery information are tested and maintained on an ongoing basis, under the direction of the County's Chief Information Security Officer.

BUDGET: $4,760,309
FTE: 23

C. SYSTEMS & PROGRAMMING

Systems & Programming staff provide our customers with high quality information application services. This incorporates consulting with customers about their present and future technical application information needs, proposing innovative solutions to meet the customer's business goals, and incorporating appropriate state-of-the-art technology solutions in designing systems and application programs. S & P also provides application development, integration, implementation and maintenance services, resolves customer's requests for assistance in a timely manner, and promotes an atmosphere that encourages entrepreneurial skills for individual staff member's initiative and innovation.

Our Systems & Programming staff do this by using Service Level Agreements on DoIT's mainframe application server, using IT tools such as

COBOL, IDMS, CICS, FT, and Oracle, and PC applications such as Access. They assist DoIT customers in their annual budgets and provide 24/7 support for applications.

BUDGET: $4,156,448
FTE: 30

D.   NETWORK SERVICES

Our Desktop and Network Services' staff provides our customers with business and technical consulting services, which includes overall IT infrastructure design and implementation, contract and project management, contract negotiation services, system integration services, enterprise-wide computing and file server availability, full back-up and storage services, facility planning services, corporate e-mail and internet.

As part of the business analysis functions, Network Services will support County departments in their IT strategies to ensure that their IT solutions align with their business goals. The number of Service Level Agreements (SLAs) with departments remained the same for this year. The SLA basically gives a department a guaranteed level of service, and provides DoIT with a guaranteed staffing requirement for a period of three years. This makes it much easier to budget both costs and revenues over the long-term.

BUDGET: $627,463
FTE: 7

E.   INFORMATION SECURITY

DoIT is responsible for the formation and ongoing maintenance of the Countywide Information Security Program. This program includes the implementation of the Countywide Information Security Awareness, Risk Assessment and Business Resumption programs. These programs are lead by the County Chief Information Security Officer, and include the following:

Information Security Program (ISP): This program covers maintenance of County controlled assets, integrity, security, and oversight.

Security Awareness Program (SAP): This program will ensure all County employees thoroughly understand and acknowledge that protection of County controlled assets is critical to the survival and well being of the County, as well as themselves.

Business Resumption Program (BRP): Business Resumption is the overall umbrella that covers Disaster Recovery (an IT function) emergency preparedness plans, and employees personal recovery capability that would cover such things as PC backups, restores, and off-site documentation (operational procedures).

<u>The Information Security Advisory Committee (ISAC)</u>, comprised of departmental representatives, reviews and updates the Information Security Program.

BUDGET: $408,167
FTE: 3

F. TELECOMMUNICATIONS

The Telecommunications Division is responsible for County telephone and radio systems. On a day-to-day basis this division maintains and coordinates all of the telecommunications needs for the County. Tasks for the telephone group run from the moving of individual telephones to the design and installation of a state of the art digital telephone switch system, which serves thousands of users. The radio group maintains public safety radio systems used by police and fire agencies. They maintain portable, mobile and base station radios used by these agencies as well as the mountain top radio sites where the voice and data is transported via the County microwave radio system to the dispatch centers.   Both groups are constantly evaluating the present telecommunications systems with an eye towards the future modernization of these systems as technological changes occur.

BUDGET: $6,335,566
FTE: 23

G. WIDE AREA NETWORK

The WAN staff is funded entirely by customer fees for a monthly, per-unit, connection to the County's Wide Area Network (WAN) Infrastructure. Their job is to insure the ongoing support and maintenance of the County's WAN backbone. As of this year, all County employees are able to dial into the Contra Costa County network infrastructure from any place in the world, for the price of a local telephone call, as though they were simply working at their desk. Contra Costa County is the only County government in the State of California that funds its WAN infrastructure on a centralized basis, similar to the private sector AOL or Earthlink models.

BUDGET: $1,892,043
FTE: 4

H. GEOGRAPHIC INFORMATION SYSTEMS

The GIS Business Unit is responsible for coordinating GIS activities across all County departments. It is funded by contributions from each participating department, as well as by a portion from the general fund. The primary responsibilities are to plan the overall GIS strategy for the County, act as a central resource for all departments, develop centralized applications and information sources, set policy related to GIS, and to ensure that GIS-related

applications work together by developing standards and communicating with department representatives.

The Geographic Information Officer reports to the County CIO but serves under the GIS Policy Committee. This committee is made up of department heads from each stakeholder department, and approves the GIO plans, priorities and budget. The GIO is also responsible for facilitating technical level coordination meetings within the County and between other agencies, as well as interfacing with other organizations on policy level discussions.

BUDGET: $850,000
FTE: 1
> **NOTE:** GIS funds are provided to the County General Fund account or budget unit by participating departments, so they are not included as a part of the DoIT's budget.

I.   DEPARTMENT DATA

BUDGET: $20,146,394[1]
FTE: 110

CLASS	ALLOCATED POSITIONS[1]
CIO	1
Administrative Services Officer	1
Administrative Support / Customer Support Center / Business & Technology Innovation Services	13
Accounting	4
Security	3
Operations	23
Systems & Programming	30
Network Services	7
WAN	5
Telecommunications / Radio Communications	22
Geographic Information Systems	1

NOTE: (1) Budget Data as of 07/01/2002

EMPLOYEE PROFILE[2]

	Male	Female	Total	Percent
Caucasian	38	24	62	61%
Hispanic/Latino	6	3	9	9%
African American	4	6	10	10%
Pacific Island/Asian	9	10	19	19%
Native American	0	1	1	1%
Total	57	44	101	100%
Percent	56%	44%		

NOTE: (2) Personnel Data as of 02/24/2003

III.   DEPARTMENT ACCOMPLISHMENTS

A.   ADMINISTRATION SUPPORT/CUSTOMER SUPPORT CENTER/ BUSINESS & TECHNOLOGY INNOVATION SERVICES.

Administration Support: Implemented an interim telephone billing system that will accommodate new telephone billing information, so customers receive timely billings. Renegotiated the County's 1-800 billing rate, saving departments an estimated $10,000 per month.

Customer Support Center: We have recently increased our hours of service. We are now available from 6:00am until 5:30pm, five days a week. With this newest change we have picked up Work Request processing for Telecommunications. Additionally, we have increased our Telecomm workflow to enable us to process and complete substantially more Work Requests each day as well as tickets from the previous night. With our staff in place at our new earlier start time we can open and process tickets more quickly. We have changed the process by eliminating the step of contacting accounting to verify authorization signatures. We have improved that process by having all signatures addressed directly to CSC.

Each CSC representative has improved their skill set with Windows 2000. Some have also taken 'PC Troubleshooting for Windows 2000.' This has increased our confidence level within DoIT. This is evident when CSC is able to answer calls efficiently and accurately during crisis events when Network Services has no one available. With the inclusion of network staffing in CSC it has been extremely helpful when calls come in regarding network or PC problems, which we were not originally equipped to handle.

In conjunction with Health Services and Telecommunications, we are actively working on a new procedure that will improve Work Request processing by enabling users to open their own Work Requests on-line and minimize downtime. This gives users the ability to follow up on their own Work Requests when there are questions or the problem remains outstanding. CSC has built a database library that allows us identify and correct almost all duplicate orders. By keeping this library updated with all current issues we can readily fix most problems on the first call. We have the ability to shadow users in Citrix that allows us to walk them through a problem with the correct navigation.

We have also been assisting with services that Systems & Programming have not been able to do due to heavy workloads. We completed a project for the CAO's office that involved moving needed files created in Word Perfect to the Web. Because this cannot be done in Word Perfect, we first had to convert the files to Acrobat PDF files and then post them on the Web.

CSC has also improved its ability to monitor all networks in the County by installing a Web-based monitoring system. This system highlights networks on a TV screen and also emits a siren when the network has failed. This system has improved network availability because we now know, within seconds, of a network outage and can contact the WAN group immediately.

Even with a significant increase in workload we have managed to keep our staff to the current level without degrading CSC phone services. This has been accomplished with our improved skill sets and upgraded procedures.

Future Endeavors: CSC is looking into additional improvements to our skill sets by increasing our knowledge of web based applications as well as web development. We are continuing to work with the WAN group to improve the password reset process for departmental websites. Instead of calling or opening a ticket for the WAN group to complete this task CSC will have the ability to reset Web passwords for individual websites. With the upgrade to PeopleSoft release 8.1 we should move the responsibility to reset passwords and database authorizations into CSC as we did with Kronos. This would centralize all user id administration under a single department thereby eliminating channeling these calls to Systems & Programming.

Business & Technology Innovation Services: This year we have enjoyed several successes with the continued production of the business card CDs and DVD compilations. We have become the County's source of information regarding the production of these CDs and have worked with departments within the County to duplicate our success. We have also begun developing DVD compilations and have just recently introduced our latest DVD. This DVD contains the lunchtime presentation of the Technology Fair. These DVDs have been distributed to various news and magazine venues for article write-ups.

In addition, we have been profiled in two national magazines and several governmental publications. We continue to meet with departments and provide consultant services to those departments looking to change their website. In addition, we were key in the creation, design and deployment of the new look and feel for the County Website. This endeavor involved the CAO's office, the Library, DoIT internal staff, and staff from every County department using the Internet. Our new website has been seen as a catalyst for other departments to update their websites and we have worked with the various departments to achieve their desired result.

In our meetings with the departments we have found there is not such a need for web development as originally expected. For those departments who are interested in web design and development this group has taken on the role of consultant, working with the departments to integrate their specific page into the new look and feel of the County Website. For those departments who are interested in using our services, the Business & Technology Innovations Services unit works within the department to find the best fit as far as programming is concerned.

This group is also responsible for the continued successful Tech Fairs. This year's Tech Faire included was entitled "Technology & Succession: Implications and Expectations." The entire day was dedicated to exploring the idea of Succession Planning. It was extremely successful and as a result of the program, several departments have contacted us for more information regarding succession planning for the County. The Innovations in Technology competition, which calls for competition within the County for innovative technology solutions to problems faced by departments was again successful. We had 20 applications from the various departments and as a result several departments are now investigating the potential of using a showcased applications within their own department. They are also working inter-department wide to share applications and resources. This generated interest in technology not only within the County departments but through the private sector as well.

In addition to web development and design for the County, this unit was responsible for the re-design of the County's Intranet. We believe this is where departments will begin recognizing return on investment for their resources. Currently four departments have posted information to this site. We are working with other departments who will begin providing services to other departments, via the Intranet. Also, this unit has been responsible for the system upgrade and procedures development to create a secure, robust place for the County Intranet. We have also created a new look and feel for the DoIT's internal Intranet. This website allows all DoIT employees to easily find out what is going on in the department, locate various documents and submit many forms electronically.

B.   OPERATIONS

- Implemented 'Secured File Transport' in conjunction with Wells Fargo. This securely moves our bank data via the Internet using 128 bit encryption. It has provided us with a higher level of reliability, much faster data transfer and on-time delivery of reports to the customers.
- Installation of two (2) Heidelberg Digimaster 9110 digital printers. These high-speed (110 ppm), cut-sheet, page printers have given us the additional capacity necessary to provide our customers with high quality output.
- Eliminated18-track 3480 cartridge tape drives to give us a savings of over $12,000 per year in maintenance costs.
- Installed a new Sunfire processor for the Municipal Courts.

C.   SYSTEMS & PROGRAMMING

<u>**Health & Human Services**</u>

<u>**Employment & Human Services:**</u>
Direct Deposit: Direct Deposit was implemented for welfare client's cash benefits. The project has greatly reduced the printing of paper warrants which has the added benefit of freeing up Operations' Control staff, since there are fewer warrants to burst and sign. It has also reduced the number of lost and stolen warrant claims.

Electronic Benefits Transfer System: Contra Costa County was one of the first five counties in the State to install the Electronic Benefits Transfer (EBT) system. This is a federally mandated system. The system has done away with ATP (Authorization to Participate) forms that were used to receive food stamp coupons. Now clients are issued a debit card much like an ATP and can access their food stamp benefits at local retailers through POS stations. This has eliminated the need to print food stamp authorization forms and direct mail coupons. Fraud has been greatly decreased and it is nearly impossible for a client to sell the food stamp benefits to others. Our County has chosen to offer clients the option to have the client's cash benefits added to their EBT card. Between direct deposit and EBT, warrant printing for welfare has been cut by more than half. We no longer need to have the ATP forms on hand or control their issuance. These forms were under the same security procedures as the warrant stock.

CalWin: DoIT is currently working with the customer on their data purification processes. This requires three rounds of processing with the vendor over the next year. More accurate data will result in less work for the caseworkers when CalWin gets into this County. If there are significant errors in the data, cases will not load into the CalWin system. If the case rejects, it is estimated it will take four to five hours to enter it as a new case into CalWin. Eliminating as many data errors as possible will significantly reduce conversion costs.

Department of Child Support Services:
Email Notification of Direct Deposit: This last year we added email notification capability to our direct deposit process for Child Support Payments. Now clients can request an email payment advice sent to their personal email account. This has had a great impact to clients, who now receive same day notification of when their direct deposit has been made. The project reduced paper and postage cost. About 1/3 of clients receiving direct deposit have requested email notification.

Automated Case Closure: We wrote programs to select cases for potential closure based on criteria from DCSS. The process creates letters to notify clients that their case will be closed and closes the case 60 days after notification if there has been no action taken on the case. This process saves many hours of manual reviewing and closing cases eligible for closure. It also motivates clients to provide more information on cases to keep them open.

File Transfers: We have converted several processes that created tapes that were mailed to outside agencies to FTP (electronic file transfer). The data coming back from those agencies has also been converted to FTP processes. This has saved time and money both in processing and mailing.

BEST System Update: We have put into production over 25 system updates from Alameda County. We have also completed over 100 one-time requests for data or reports from DCSS during the past year and have written numerous programs for data extraction and report generation for Federal and State audits. DoIT established T1 connection between Alameda and Contra Costa Counties enabling us to receive program updates and programming/troubleshooting assistance.

Health Services Department:
Vendor Tracking System: DoIT completed conversion of the Focus vendor tracking system to Access 2000. As of January 31st, 2003, we ceased running Focus on our mainframe, which has eliminated the maintenance fees for this product.

Telecommunications:
Phone Directory: The employee Phone Directory went online on the CCC Intranet and County Departmental/Subject listings on the CCC Internet as of March 2002. This reduced the number of printed directories required and made subject and department information more readily available to the public. It also allowed County departments to update the directory entries for their department, eliminating the need to send changes to Telecommunications' staff for entry.

CalNet Billing Conversion: We successfully completed the development of the system to take the telephone billing data from SBC and format it to bill County departments for telephone service. This Access system replaced the existing mainframe system, thus eliminating the need to support that legacy system.

General Government

- Implemented the Memorandum of Understanding (MOU) agreements between the unions and the County into the Peoplesoft system. This included major changes to the Retirement processing. Total work effort was 4 months (approximately 2,250 work hours).
- Implemented changes required by Superior Courts' migration to a separate entity from the County for payroll purposes. This required changes to the payroll system check printing, report distribution and implementation of separate MOU agreements. Total work effort was approximately 750 work hours.
- Implemented a new network to accommodate our migration of the Peoplesoft system to an Oracle database platform. This included the addition of 4 new servers, several printers and connectivity to the new RS6000 computer. Total work effort was approximately 500 work hours.
- Assisted the Training Institute to migrate to a new Training Module. This required converting existing data and supplying new information from the Peoplesoft system. Total work effort was approximately 150 work hours.
- Assisted the Human Resources department in upgrading their network and replacing 30 personal computers.
- Worked with the County Administrator's Office to implement the combining of the East County Fire Districts into one entity. This required modifications to payroll procedures and consolidation of files and reports.

Law & Justice Information Systems

The banner cry in Systems & Programming - Law and Justice (S&P-LJIS) this fiscal year has been '*JBSIS*'. Close behind that was '*8715*'. Both are major State mandated projects which the Law and Justice Team completed development of and installed this fiscal year. The other projects to which our efforts were directed ranged from small to medium and are covered in the specific applications below.

Courts:
- Completed development of and installed the *Courts' Super Session Sign On*. Most of the development of this project was done in fiscal year 2001-2002; however, it was installed during fiscal year 2002-2003. This enhancement allows Court staff to log on based on the Super Session sign on. This increased security and reduced the administration of multiple passwords for each Court staff. It also added functionality that allows Court staff to dynamically determine where requested reports will

print. This dynamic determination must be within established guidelines. Previously, the Court staff was limited and restricted to printing reports at predetermined locations.

- Completed development and installed the *Department of Justice 8715 Report*. This reports a criminal's history to the Department of Justice. We are still coordinating with the Department of Justice to resolve the final reporting format. This final report will be completed by fiscal year end.
- Completed development and installed the Administrator of the Courts' *Judicial Branch Statistical Information System (JBSIS) Phase I*. The two reports developed in JBSIS Phase I are the *JBSIS Misdemeanor/Infraction Data Matrix* and the *JBSIS Felony (Part 3) Data Matrix* reports. *JBSIS Phase I* was installed February 2003. We began collecting statistical data on March 1st, 2003. Our first automated reporting to the State of California will be March 31st, 2003. This system uses an IDMS database on the mainframe, an ORACLE database on the mainframe, and MC ACCESS database on the client to gather the data and report to the State.
- Completed development and installed the "*Paper Clip*" process. This added functionality allows Court staff to 'paper clip' a citation entry by suspending a citation entry session, saving the data that was already entered, and return at a later time and 'recover' the original data. This has saved time and eliminated the necessity for Court staff to reenter data.
- Modified the *Bail Calculation* process to calculate new State mandated surcharges and distribution of penalty assessments.
- Provided requested Ad Hoc reports to such agencies as the National Center for State Courts (NCSC).

JAWS:
- Automated the *Active Warrants* process to verify the integrity of and synchronize warrant data on the mainframe and on the AS400.
- The *Warrant Notice* process generates income. When the defendant who receives notice that an arrest warrant has been issued pays the bail amount, the cost to process through the legal system is drastically reduced. It also reduces (or even eliminates) activity that requires serving the warrants. Two significant enhancements were made to the *Warrant Notice* process this fiscal year.
- Enhancement to incorporate text in the Spanish language.
- Enhancement to send notices on warrants that were issued prior to the time the automated process was implemented. These warrants were manually issued and were still outstanding. Defendants had not received notice that an arrest warrant had been issued in their name. This process notified them and gave them the opportunity to pay the bail amount.

District Attorney:

- Reengineered the Cases Heard Reports. The reports may now be requested by severity, unit, court and branch. Each request type has its unique data and sort criteria.
- Added functionality to capture the *Unit and Investigator* to which a defendant is assigned. This added functionality allows the ability to request *Unit and Investigator* reports by either the unit, the investigator or both.
- Improved functionality to allow the DA staff to dynamically change print locations.
- Improved functionality in S*ubpoena Inquiries* to change the search criteria and to do "*Mass Call Off*". The "*Mass Call Off*" functionality saves time because the DA staff no longer has to "*call off*" a subpoena for each individual.
- Reengineered the *Subpoena Activity* process to add functionally for scrolling.
- Added functionality to P*urge Complaints* based on predetermined purge criteria.
- Improved the *Subpoena Roster* function to allow adding Notations (notes) to the witnesses' and/or victims' data.
- Added the *Enhancement Sequence Numbering* process to the *Juvenile* system. This allows the DA and Probation staff to change an enhancement without having to modify all associated charges and enhancements to the charge. Previously the entire petition needed to be reprocessed/reprinted, which was time consuming. This enhancement has streamlined the process.

Public Defender:

- Improved the graphics and re-designed the internet site.
- Further enhancements are being developed which include adding the attorney bios.

Probation:

- Working with the Probation staff to prepare for migrating to a new platform and a new case management system.

Land Information Systems

We are now in the final year of our Service Level Agreement with the Tax Collector, Auditor and Assessor. All three departments have approved the cost for our next three-year Service Level Agreement 2003-2006, which will be signed by June 2003. During the past year our team has accomplished or is in the process of completing the following tasks:

Assessor:

- Fully loaded the Oracle eLIS database in July 2002. The data for this database was supplied from the Assessor's Land Information System. This database is updated on a periodic basis with current data from the legacy DC-IDMS Land Information System. Migration of this data to a relational platform will allow the Assessors' data to be used with our GIS system, ad hoc reporting, and make the data available to other County departments. We have established connections to the database for some County departments and are in the process of connecting others.

- Conversion of the Assessor's applications to Oracle/CICS/COBOL II platform (Phase II). This project has instituted an "assembly line" approach to enhance the time of conversion of each program/map. This process is very labor intensive, but this will allow us to keep all of the business rules and logic that have established by the departments that make up the Land Information Systems.

- Worked with outside vendor to coordinate the installation of the PC/Network based Appraisal Entry System. Communication was designed between the Appraisal Entry System and the Assessor's current mainframe IDMS-DC system (Land Information System) to allow the updating of parcels from work generated from the Appraisal Entry System.

- Installed a new balancing procedure for the Unsecured Tax System (BUD). These on-line reports now give the user a variety of ways to display and total information. Prior to this the reports would not balance and caused a large amount of staff time to get them to balance. Presenting this information on-line has also assisted in lowering the amount of print that was generated in past.

- Have started the process of converting many of the hard copy printed reports that are generated out of the Land Information System on a weekly, monthly, and annual basis to a PDF format. This has reduced the amount of paper that is being generated to produce these large reports. The files are file transferred over to their server for them to index and view.

Auditor-Controller:

- Auditor's conversion from FOCUS to CICS/ Microsoft Access Application. (Refunds, Property Tax Analysis, Journals, Supplemental, and Home Owners). Auditor and a DoIT Analyst worked diligently towards the final approval of the application process. Numbers from the CICS/Access application were verified against the legacy FOCUS application. In March of 2003, the numbers from the CICS/Access application will be used for reporting.

- This will mark the end of FOCUS for the Auditors. They will see a reduction in operating cost because they will no longer have to pay for the costly FOCUS maintenance.

- By converting to the new platform, DoIT has more employees with these skills sets that can assist Auditor staff with questions about the system or perform system enhancements.
- Comparison reports were developed for the Auditor to allow them to compare current and prior year Tax Rate Area information. Prior to these reports, the reconciliation process would take weeks to validate. With the reports, this process was completed in one day.
- Levies on-line allowed the Auditor to see an actual breakdown of the tax amounts by parcel. Prior to this, they would only know the total amount due and have to consult hard copy data to view the levy portion of the tax amount. Improved customer service when answering taxpayer's questions is one result of online process.

Treasurer-Tax Collector:
- On-line inquiry application that allows the Tax Collector the ability to view all taxes (secured, delinquent, and supplemental) from one screen. This has reduced the amount of time it takes employees to respond to questions from taxpayers.
- Automated the Secured Abstract Maintenance (Delinquent Tax Bills) Reminder Notices. This manual process consumed three employees' time for preparation of the mailing. Once the Reminder Notice was returned a tax bill had to be printed prior to submitting the bill for deposit, which consumed additional amount of staff time. Now, the notice is on the tax bill, the bill is printed at DoIT and mailed to the taxpayer. This has also reduced the amount of paper that has been sent out with each mailing.
- Automated the Secured Abstract Maintenance (Delinquent Tax Bills) installment letters. In the past, large amounts of staff time were dedicated to this manual process. Similar to the Reminder Notice, the installment information is printed on the tax bill, the bill is printed here at DoIT, and mailed directly to the taxpayer. This has removed the process of Tax Collector employees having to generate a tax bill for each payment received.
- Automated the manual process of typing information onto the Secured Cortac forms. This information now is printed onto the forms as they are being generated out of the printer. This saves many staff hours.

D.   **NETWORK SERVICES**

The Network Services Team continues to focus on building a Countywide network directory. This is an enterprise road map for the County departments' networks to work and share resources with each other securely. We have successfully upgraded and integrated a third of County departments into the network directory.

- Successfully migrated ten County departments to the Countywide network directory

- Worked with four other departments in Countywide network directory migration
- Completed a network for PeopleSoft HR/Payroll Oracle database conversion
- Setup and support Countywide annual budget system training
- Support and maintain the mainframe distribution printing at County departments
- Migrated the Animal Services network and Chameleon application
- Provided network Service Level Agreement support for the Board of Supervisors, Clerk of the Board, Agriculture, County Counsel, County Administrator's Office, Office of Revenue Collection and the Department of Information Technology
- Provided network and desktop support to other County departments based on time and material.

E.   WIDE AREA NETWORK

- Improved e-mail virus scanning and added spam filtering. This resulted in blocking over 350 infected e-mails each month and dropping 6,000 spam e-mails each month. In combination with WAN-provided virus scanning on the desktops, this has resulted in reduced virus infections and lost time for our customers.
- Increased Internet access at a reduced cost through consolidation of Internet Service Providers. This increased bandwidth is used to support the County Libraries and new technologies being implemented within County departments such as Web based training and video conferencing.
- Continued upgrading WAN equipment. This includes implementing a new higher capacity firewall to support increased Internet access and security requirements. Reduced the count of WAN equipment, which improved WAN reliability and reduces costs. Implemented redundant servers to support core WAN technology to eliminate downtime due to equipment failures.
- WAN staff worked with Alameda County staff to provide secure access to Alameda County to meet state requirements in support of the Department of Child Services Best System.
- Worked with the Courts to assist in the design and implementation of the Courts' Countywide Video Conferencing system. Worked with EHSD to assist in the rebuild of the infrastructure in preparation for the CalWIN project. Implemented WAN access to five additional fire stations within the CCCFPD network. Assisted the District Attorney with improved connectivity at their Richmond and Martinez offices. Worked with Health Services to rebuild and upgrade their WAN equipment and provided network training.
- Implemented an additional location for the Law Library in Richmond. This included providing secure VPN access to the Martinez Law Library and increased Internet access.

- Networked all major County phone locations to provide 24 by 7 remote access and monitoring. This allows DoIT telecom staff to make changes remotely and improves service. Worked with GSD to network most County facilities to support their security and environmental systems providing secure remote access.
- Re-designed the ACCJIN network to provide redundancy between the Sheriff, Warrant System and police agencies. Implemented security changes to keep ACCJIN compliant with CLETS security requirements. Implemented monitoring of ACCJIN equipment and data circuits to notify the DoIT Help Desk and WAN staff when an outage occurs.
- Tested disaster recovery procedures. Implemented recovery procedures that make use of Internet access to DoIT-contracted disaster recovery centers. These procedures have been tested with major Countywide applications supported out of the DoIT data center (Peoplesoft, LIS, LJIS, Finance, EHSD, BEST, Courts).

F.   INFORMATION SECURITY

- Our program is being adopted across the State within various counties associated with the California County's Information Services Directors Association (CCISDA). This program will not only allow counties to secure their assets, but it meets the Health Insurance Portability and Accountability Act (HIPAA) requirements. Our program is now getting national recognition through various fronts.
- Through the CCISDA Information Security Forum (ISF), we have drafted and built an Information Security Program "Best Policies" document for adoption by all interested counties. This is a compliment to the "Best Practices" that we released last year at this time. These policies are at the Countywide level so they'll need to go through the County review and approval process before publication.
- The Chief Information Security Officer (CISO) has participated in the following publications:
    - In a new publication called Chief Security Officer (CSO), the CISO was the first Security Counsel to answer questions from all readers.
    - In a presentation at a SUN Tone Security Seminar, and in an article written about him he presented the Information Security Program impact on the County's E-commerce initiatives.
- He will be a speaker and presenter at a national conference put on by MIS Training Institute in April 2003. The theme is "Information Security in Government."
- Our Information Security Program "Best Practices" document is being review by Dick Clarke's Office of Homeland Security.
- Our CISO has written an article for CA County magazine that should be published in a forthcoming release. The article is about how Contra Costa County is leading the way in Information Security and sharing the program at the Federal, State, County, and city levels.

G. TELECOMMUNICATIONS

The Telecommunications' telephone team during the past year has been moving forward with the networking of the County's telephone communications system. This project has an emphasis on disaster response, communication recovery and networking.

The telephone team has upgraded 8 locations to PRI/ISDN (Primary Rate Interface/Integrated Services Digital Network) service and installed 4 new County buildings with PRI/ISDN networking capabilities. For every location utilizing PRI/ISDN service, the County saves approximately 50% on line and service charges. An additional benefit to the customer with this service is they reap the benefit of Caller ID transport along with redundant telecommunication paths. In the advent of a disaster where the public telephone service is lost, the network will work around the public telephone network and complete telephone calls using alternate networks.

The telephone team has been preparing an RFP for a new SMDR (Station Message Detail Recording) system. This system will permit County agencies to check their telephone usage and numbers dialed per user. This reporting/budgeting tool will be accessed via the County's WAN and will be available in real time. These types of systems provide cost savings through better management controls.

A secure 64-port telephone conference bridge has been implemented. This service can be accessed from any location and will save the County telephone conferencing costs.

During the past year the Telecommunications' radio team completed the construction phase of critical infrastructure communications facilities and towers at Kregor Peak and Bald Peak radio sites. Important public service communications equipment has been moved into these essential, seismically hardened facilities and are now operational. The replacement microwave radio system, which is used to transport public service communications, has undergone extensive testing and will become operational during the first quarter of 2003. The microwave radio system will for the first time have a system-wide microwave monitoring and alarm system. This system will provide the technicians real time data on system performance and give them the ability to remotely work around equipment failure.

The Telecommunications' radio team has been working on a business plan to make the cost of the communications facilities self-sustaining in much the same way as the County WAN. This effort has required a major shift in the way the County views its funding model and now requires site users to pay for the use of the facilities. This has not always been the case in the past.

Progress has been made on the pilot program for the City of Pittsburg in the implementation of simulcast radio technology. This technology will make it

possible for public safety radio users to clearly hear their dispatcher by simultaneously using several radio transmitters. A new radio site had to be designed and built on the West side of the City. There were numerous design considerations to be met and several engineering hurdles to overcome. The result of our efforts has been the construction of a low profile, state of the art radio site that will meet the needs of the City of Pittsburg for years to come. The simulcast radio system will become operational by the summer of 2003.

Telecommunications is dealing with infrastructure issues that require short and long term solutions.

Telecommunications moved its operation from the GSD Waterbird facility to DoIT's 30 Douglas facility during August of 2002. The move gave Telecommunications better facilities and integrated its operations with DoIT.

<u>Future Endeavors:</u>
There are five major efforts planned for the Telecommunications telephone team during 2003. We will add three more PRI/ISDN (Primary Rate Interface/Integrated Services Digital Network) sites onto the County telephone network. Our long-term plan is to have all 30 County PBX sites on the network by the end of 2004.

Plans are also underway to incorporate the new digital microwave system and digital connections from SBC to create three separate telecommunications paths. This effort will provide the County a hardened and redundant telecommunications network.

The telephone team will be preparing to implement E911 service, which will transport address and room location of a call to the 911 emergency centers. This service will enable public safety to quickly respond to emergencies at specific identified County facilities. This service will be rolled out during 2004.

Telecommunications will implement the new SMDR (Station Message Detail Recording) system. This will give County agencies the ability to check their telephone usage and numbers dialed per user. This reporting/budgeting tool will be accessed via the County's WAN and be available in real time on line.

Telecommunications will continue to evaluate Voice Over Internet Protocol (VOIP) technologies. We are currently working hand in hand with the WAN group to evaluate and test all VOIP systems, at our 30 Douglas location and will introduce this technology where appropriate.

On the radio side, Federal Engineering communications consultants completed a needs assessment and master plan for the future County radio systems. This communications study developed recommendations based on

radio technologies available to the County and interviews with County, city, and regional agency representatives. The telecommunications radio team will begin implementing short and long-term recommendations based on this communications study. This effort while appearing separate is interrelated and touches all aspects of radio communications the County will utilize for the next 10 to 20 years. Radio spectrum management, technological change and funding will have a major impact on the future County radio system. The goal is to be prepared for, anticipate the needs of, and have the financial resources in place so we can implement radio solutions for radio system users as digital radio technologies found on the Internet make their way to our radio users.

The future of Telecommunications is changing every day. The transporting and routing of telephone calls is migrating from a hardware/copper environment to a software/Intranet environment. Radio systems are becoming integrated and support several technologies over the same radio platform. Telecommunications will continue to investigate newer technologies and introduce them as they become viable. If we do not accept these Telecommunications challenges we will only compound problems and expense in the future.

H. GEOGRAPHIC INFORMATION SYSTEMS

Powerful Analytical Tools
The availability of GIS has increased the importance and utility of the geographic component of information that governments routinely collect and maintain. GIS adds a powerful package of tools to an organization's information technology capability because of its ability to integrate and analyze diverse types of information based on physical location or proximity of various features or characteristics. Many of the advantages of a GIS are unique to particular applications. However there are several general advantages that a GIS offers public agencies and institutions.

Integration of Different Types of Data Based on Location
A GIS provides the capability to bring together different types of information based on their proximity and to explore their interaction. For example, in researching ground water quality issues, information can be brought together on soil type, depth to ground water, fertilizer usage, cropping patterns, and irrigation usage to model the impact of irrigated, fertilized crops on ground water quality in a given area.

A Picture is Worth a Thousand Words
The ability of a GIS to graphically display (map) different features or characteristics, relative to their location, is a valuable tool in making an overall assessment of the implications of a particular set of information for public policy decisions or program planning.

Recording Changes and Keeping Maps and Records Current
The active link that a GIS allows between databases and maps greatly facilitates the maintenance of mapped information on dynamic features such as property parcels, etc. For example, with a GIS a County Assessor can, with relative ease, update a property parcel map with new information on an easement for a buried cable and tie that back to a database with the owner's information.

Enhanced Analytical Capabilities
A GIS provides a user with new enhanced analytical capabilities that would be difficult, if not impossible without this technology. For example, with the proper geographically referenced information, a GIS can very quickly determine which emergency unit should respond to an E911 (Emergency 911) call from a particular telephone number and the fastest route to take during rush hour traffic.

Facilitates Sharing of Information among Multiple Users
GIS facilitates the sharing and integration of geographically referenced information among multiple agencies or users. There are many applications that require common types of data (highways, streams, property parcels, etc.). A coordinated approach to GIS development would reduce the costs associated with the duplication of data development and maintenance by having one entity responsible for the development of a given type of data for a given area. This also has another benefit in that different public entities and agencies would be making and implementing public policy based on the same information.

GIS Accomplishments:
Note: This covers a period of less than six months since the establishment of the Geographic Information Officer position.
- Completed the Needs Assessment surveys for the County Administrator's Office and the Building Inspection department. The survey is in-progress for the Department of Information Technology.
- Created a County GIS data sharing policy and began its implementation phase.
- Assisted with implementation of a mapping consolidation effort to combine mapping efforts of multiple departments into the Assessor's Office.
- New GIS web page development is 90% + complete.
- Conducted surveys of other agencies and performed site visits in preparation for the development of our Enterprise GIS Strategic and implementation plans.

I. **DEPARTMENTWIDE**

Internal to DoIT: The DoIT has continued to compress the total cost of ownership (TCO) model for the department during fiscal year 2002-03. We

continue to move as many employees as possible to laptop and other mobile technologies, allowing them to work "unconnected" in the field. Wireless use has taken a big jump internally in the past year, as we continue to test the potential of this new technology inside the department before rolling more Countywide applications out.

DoIT's internal web development staff of interns has continued to shine. The County once again had its web site upgraded by our Team of Interns, and we completely re-built our internal web site, adding more electronic applications within the department. Transition and succession are still major issues within the department, and we have dedicated a great deal of staff time to this project during the past year. We hired a company named Effective Training Solutions (ETS) to work with us. This company has worked all over the world with such high tech firms as DELL Computer, IBM, and Advanced Micro Devices. Our entire Senior Management Team has completely documented their responsibilities and work effort. This information is now available to the entire department electronically on our Intranet site. The program was funded by the County Administrator's Office as a pilot that can hopefully be rolled out to the entire County.

We continue to explore new technologies that will allow for the integration of the County's "legacy applications," valued at some $200,000,000. With the present budgetary problems, replacement of these systems with newer technologies will not be an option. Finding a methodology to integrate the millions of pieces of data contained in these systems is crucial.

The department continues major research and development in the area of wireless technologies. A number of our technical specialists have attended highly specific schools on this technology, including the use of Instant Messenger (IM) applications and security for wireless applications. There have been seven new variants of wireless technology released in the past year, and as stated last year, if this technology proves successful, in terms of the technical and security aspects we are looking for, the potential savings to the County in terms of not having to refresh the wiring in our buildings as new technologies arrive in the marketplace will be in the millions of dollars. We have also spent a lot of time and research in the area of "SPAM" fighting. SPAM is unwanted e-mail, marketing electronic "junk mail" and the like. We continue to increase the blocking devices and technologies to stop this unwanted traffic from clogging our internal network.

Understanding very strict budgetary limitations are coming, we have been focusing on upgrading and replenishing our oldest technologies as funding allows, while at the same time working out ways to extend the life of those technologies we will be unable to upgrade for 24 months.

Internal to County Operation: DoIT is constantly striving to keep pace with the demands of our customers, who are adapting to all sorts of new

technologies over the County's backbone infrastructure. There has been a lot of concentration on wireless and web applications, the implementation of two new video systems (Courts and DCSS), as well as growth in handheld device (Palm Pilot types of machines) technology throughout the County. We are also implementing a number of new applications in the Telecommunications area to compress the cost of telephony. The new telephone accounting application projects a return on investment of less than 18 months, and we negotiated a new long distance contract that will save the County between $120,000 and $150,000 annually. We are using as much of these savings as possible as revenue to continue the rollout of new technologies in these business areas. Operations has implemented new technology that provides for the transport of payroll data to the Federal Reserve at twice the previous speed, while increasing the encryption to the 128-bit standard, which greatly enhances the security of payroll information. The County's WAN infrastructure was once again available for this high-speed traffic, which comprises the County's communications backbone for data and video traffic, available for service 99.99% of the required time.

The DoIT is preparing for massive cuts to the mainframe computer operations model, caused by the expected 2004 departure of the Department of Child Support Services, and the expected 2005 departure of the Employment and Human Services Department to centralized state applications. This loss of Data Center and operational revenue is projected at $4.5 million annually. The County will have to drastically alter its charging model for the remaining customers, outsource the remaining applications to another County Data Center (or private company), or make up the difference out of the General Fund. All of these alternatives are being explored and analyzed at the present time, and all affected customers will be included in any decision we have to make. As a starting point, we will be moving our entire Operations Team to a new set of shift schedules (collapsing three shifts down into two) and running the Data Center "lights out" (e.g., on automated control systems) on an expanded basis. However, a majority of the operational costs are the result of staff salaries, and we are analyzing alternatives for this.

There has been a big push in the area of Geographic Information Systems during the past year, and Contra Costa County continues its leadership role in this arena. The Contra Costa Times ran a special newspaper insert on all of the GIS projects being rolled out throughout the County in March of 2003. There are now 14 departments paying into the annual GIS fund, which has allowed the County to move forward on a number of fronts. The Elections Department will be joining the enterprise GIS effort in fiscal year 2003-04. Contra Costa is the ONLY large County in the State of California with a planned and directed Enterprise GIS initiative. Many other counties in this state, as well as others, continue to watch with interest as the "Contra Costa Experiment" moves forward. The County's new Geographic Information Officer has been asked to relate the County's vision at a number of

conferences and meetings. By July of 2003 the County's completely revamped GIS web page will be live and in production for citizen and employee use.

The County's use of on-line payments has been a huge success for the Department of Child Support Service, and Building Inspection will be allowing for on-line payments by July of 2003. The CAO's Office and the DoIT will continue to track the use of this technology and build a cost savings model. The CAO's Office is in the process of designing and piloting a weekly Board of Supervisor's Agenda Submission and collaboration system. This application will allow departments and the CAO's Office, as well as the Clerk of the Board, to electronically develop the Board's agenda via desktop computing. The County's internal phone directory went on-line as well this year, saving thousands of dollars (not to mention thousands of trees) in the cost of producing paper phone books for County departments and citizens.

The Telecommunications Team completed the total upgrade of the County's microwave infrastructure and components. Telecommunications has now moved forward with the CAO's Office to fund and begin upgrading the County's very old public safety radio communications systems. This project will result in most, or all, County agencies being able to achieve "interoperability" with one another, specifically in the event of a major disaster.

Probably the biggest project for Telecommunications during the past year has been the planning and study for a complete replacement of the County's Public Safety Communications system, in conjunction with the County Administrator's Office, the Sheriff's Office, and Federal Engineering of Alexandria, Virginia. This project will culminate in the replacement of the County's aged public safety communications system on a regional basis.

In the past year the Telecommunications telephone group has replaced the County's aging and failing voice mail system with a totally new redundant system. This system has tape backup with mirrored hard drive arrays for maximum reliability. The system is connected to the County's network via digital service, allowing the user to be transported directly into his or her mailbox just by pressing the message button on their telephone. This eliminates the need to dial an access number. We have also upgraded the three other voice mail systems to allow their hard drives to be backed up in case of failure.

The Telecommunications radio group is managing a pilot program for the City of Pittsburg in the implementation of simulcast radio technology. Simulcast will provide public safety radio users the ability to clearly hear their dispatcher by simultaneously using several radio transmitters. From this program, the County will be able to apply lessons learned directly to a simulcast Countywide radio system.

IV. DEPARTMENT CHALLENGES

A. INTERNAL TO DEPARTMENT AND COUNTY OPERATION

This section has been combined for this year's report, because the same issues will impact both the internal department and the County in the same fashion, resources and actions outside of our own control.

The DoIT is now in a transition period, in which a vast majority of the institutional knowledge in the department will be leaving us within the next five years. The professional staff that built many of the applications running in the County today will no longer be available to support them. Universities are no longer teaching the skills we will require to continue to maintain these systems, and young people in college find these "old fashioned" technologies boring and uninviting in terms of the challenges and opportunities they are seeking. To be sure, the County is not alone in this dilemma. Most major financial institutions and larger commercial businesses employ similar technologies, but this transition process to a new generation of technologists is cause for concern to all of us. This can also be viewed as a "human nature" problem. Employees who have to learn one new piece of technology after another for a period of 20-25 years as a necessity of their profession, and are very close to retirement, are resistant to return to school to learn a new technology they might only use for a year. Some of these newer technologies take over a year of classroom and "hands-on" training to become proficient in. Our options will be one of four: Hire new people and spend hundreds of thousands of dollars to train them in these technologies, spend tens to hundreds of millions of dollars to replace all of the outdated technologies, outsource all of this work to a company that specializes in these older applications and can afford to hire the staff who will run them, or revamp current hiring/promotion requirements to enable training of gifted employees in lower paying jobs for a more cost effective transition. Budgetary considerations will play a very large part of the decisions made.

The impact of massive budget cuts in the County will have a profound impact on the above issue. There is always the internal fight of saving department program dollars versus department operational support dollars. The County must continue to provide necessary services outlined by the Board of Supervisors. However, almost every County department relies heavily on its application of technology. When the DoIT has to make staff cuts because of budget cuts dictated by departments, we lose staff resources who may have been learning a County-specific set of tasks for a period of a year or more. Replacing these resources in better budget times will not be a matter of months but years due to training ramp-up. This gap will be filled out of necessity by more expensive contractors who will work as interim staff, then leave the County, taking along with them the institutional knowledge they have gained. The alternative would be to not support such applications and risk operational program failure. Equal cuts across the board no not produce

equal impacts. Impacts to current technology operations will produce far graver long-term consequences.

In the midst of all this, the County will have to make the very tough decision about beginning work on a new long-range plan and rollout of a regional public safety communications system. The CIO is in agreement with the Sheriff in that the present 25-year-old system is antiquated and needs a major retrofit, some of which has already been accomplished. Interim systems fixes will serve us in the intermediate term, but a new system MUST be developed. However, the potential cost (other agencies and consultants predict numbers anywhere between $40 and $65 million), and the timeframe to get through all of the political and environmental review processes, as well as the fact the new radio frequency spectrum will not even be available until at least 2006-07, makes this an undertaking of monumental proportions and consequences.

V.   PERFORMANCE INDICATORS

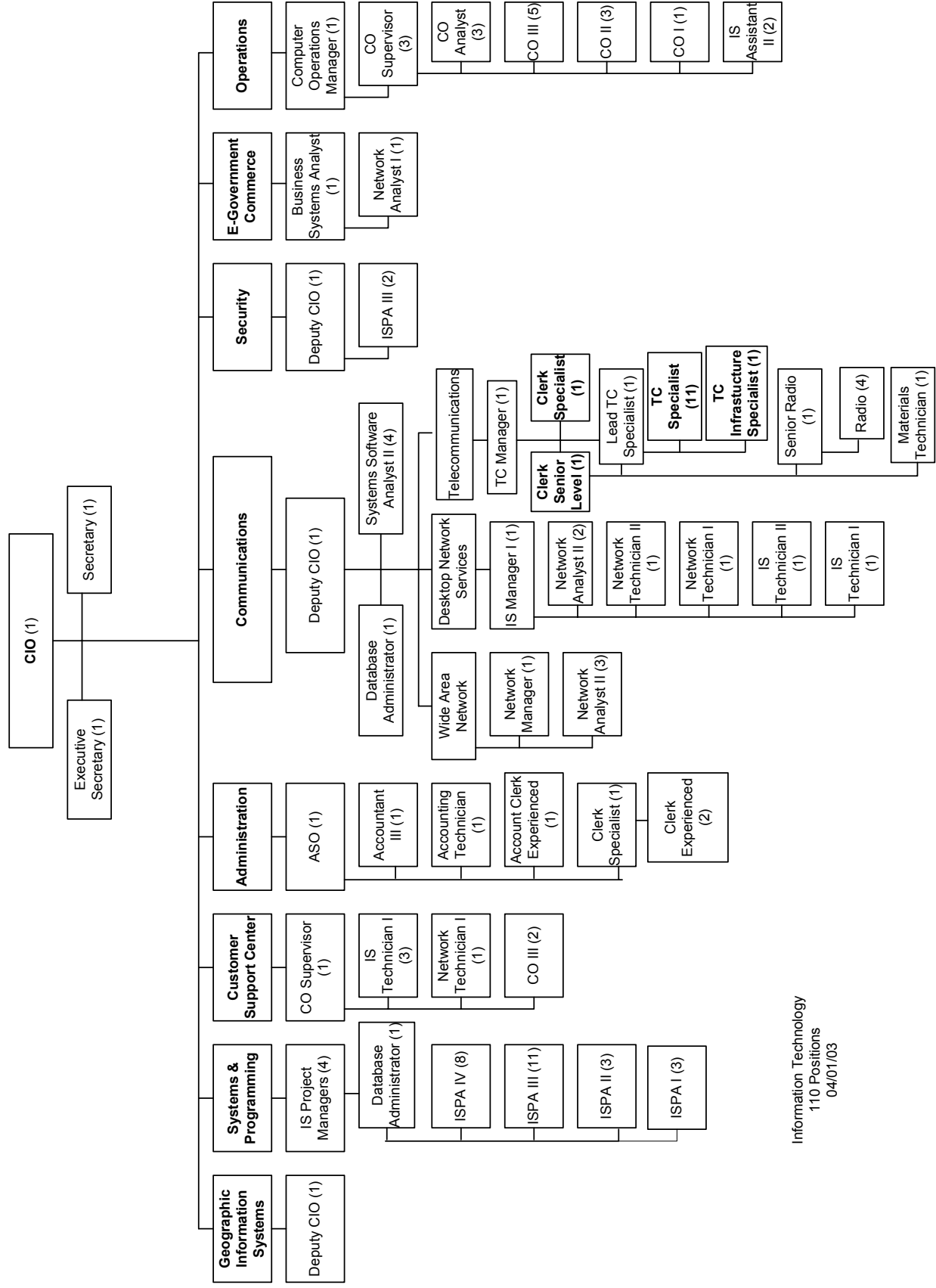| DoIT	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
Performance Measures	**Actual**	**Actual**	**Estimated**	**Estimated**
Workload Indicators				
WAN Characters Transported Monthly (1)	55	71	79	
EMails Transported Monthly (3)	-	-	300	350
Enterprise Server Transactions Monthly (2)	8	10	10	9
Number of Customer Service Calls	12,476	12,062	14899	18474(4)
Outcome Indicators				
WAN Availability	99.9%	99.96%	99.9%	99.9%
Enterprise Server Availability	100%	100%	99.9%	99.9%
Service Calls Answered at Level 1	88%	89%	87%	87%

Note: DOIT will be using Emails transported monthly instead of WAN Characters Transported Monthly as we feel Emails is a better measurement.
(1) In trillions
(2) In millions
(3) In thousands
(4) The number of Customer Service Calls has increased because the Help Desk is now handling calls for   both DOIT and Telecommunications.

Information Technology Organizational Chart

CIO (1)
- Secretary (1)
- Executive Secretary (1)

Geographic Information Systems
- Deputy CIO (1)

Systems & Programming
- IS Project Managers (4)
- Database Administrator (1)
  - ISPA IV (8)
  - ISPA III (11)
  - ISPA II (3)
  - ISPA I (3)

Customer Support Center
- CO Supervisor (1)
  - IS Technician I (3)
  - Network Technician I (1)
  - CO III (2)

Administration
- ASO (1)
  - Accountant III (1)
  - Accounting Technician (1)
  - Account Clerk Experienced (1)
  - Clerk Specialist (1)
  - Clerk Experienced (2)

Communications
- Deputy CIO (1)
  - Database Administrator (1)
    - Wide Area Network
      - Network Manager (1)
      - Network Analyst II (3)
  - Systems Software Analyst II (4)
    - Desktop Network Services
      - IS Manager I (1)
        - Network Analyst II (2)
        - Network Technician II (1)
        - Network Technician I (1)
        - IS Technician II (1)
        - IS Technician I (1)
    - Telecommunications
      - TC Manager (1)
        - Clerk Senior Level (1)
        - Clerk Specialist (1)
        - Lead TC Specialist (1)
        - TC Specialist (11)
        - TC Infrastucture Specialist (1)
        - Senior Radio (1)
        - Radio (4)
        - Materials Technician (1)

Security
- Deputy CIO (1)
  - ISPA III (2)

E-Government Commerce
- Business Systems Analyst (1)
  - Network Analyst I (1)

Operations
- Computer Operations Manager (1)
  - CO Supervisor (3)
    - CO Analyst (3)
    - CO III (5)
    - CO II (3)
    - CO I (1)
    - IS Assistant II (2)

Information Technology
110 Positions
04/01/03

G-233